The Bulletins are published weekly throughout the school year (thirty issues) to aid teachers and students in keeping abreast of geography behind current news events.

GEOGRAPHIC SCHOOL BULLETINS

of
The National Geographic Society
WASHINGTON 6, D. C.

The National Geographic Society is a non-profit educational and scientific society established for the increase of geographic knowledge and its popular diffusion.

VOLUME XXXI — January 19, 1953 — NUMBER 14

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MAYNARD OWEN WILLIAMS

A GIRL OF LUXEMBOURG STANDS BESIDE A GRAPHIC ROADSIDE GUIDE TO HER COUNTRY

By a Luxembourg roadside, an enlarged picture map guides visitors to the little nation which has been brought into closer contact with its neighbors of Western Europe by the adoption of the Schuman Plan to internationalize the region's coal and steel facilities (Bulletin No. 5).

Bulletin No. 1, January 19, 1953

Skilled Workmen Repair India's Taj Mahal

THE Taj Mahal, at Agra, India, generally considered one of the most dazzlingly beautiful buildings in the world, shares a defect with many a humble cottage and thatched hut. Its roof leaks.

Unfortunately the Taj's flaw cannot be corrected by the mere application of some shingles, a few bundles of thatch, or another coat of tar and gravel, which could restore a simple village home. The leaks are worst in the magnificent white marble dome surmounting the mausoleum, and the roofers must be stonemasons as well as carpenters.

Roof Troubled Builders During Construction

The damage now under repair was discovered in 1936. A thorough survey was made and a committee of experts recommended that the entire building be renovated. The work has been under way for several years, and will not be finished until 1954. Already it has cost $712,470.

Roof leaks are not a modern development in the Taj Mahal. In fact, they plagued its 17th-century builders almost before the mortar was dry. The building was erected by Shah Jahan, Mogul emperor of Delhi, as a memorial and tomb for his wife, Mumtaz Mahal.

Shah Jahan founded the modern city of Delhi, whose native name is Shajahanabad, but it is the building of the Taj Mahal for which he is most famous.

The Taj was begun in 1631 and completed in 1648. Four years later, even before the surrounding buildings were finished, the emperor's son, Prince Aurangzeb, reported to his father that "the dome of the holy tomb leaks in two places . . . and so also do the fair semi-domed arches, many of the galleries on the second story, the four smaller domes, the four northern compartments and the seven underground chambers, which have developed cracks."

Taj Has Romantic History

Repairs have been going on ever since, although actual work reports of the period before the British came to rule India are difficult to find. The English themselves made extensive repairs to the building at least three times during the 19th century.

The Taj Mahal has a romantic history—quite in keeping with its general glamour. Shah Jahan promised Mumtaz Mahal that he would build her the most beautiful tomb in the world, and that he would never marry again after her death. He kept both promises, and his tomb lies near hers in the magnificent structure dedicated to her memory.

Even the name of the memorial is hers. Taj Mahal, which means "Crown of the Palace," was one of her court titles.

The building, of pure white marble, stands on a vast terrace of the same dazzling stone. An imposing dome rises in the center, surrounded by four smaller domes. Four slender minarets stand at the corners of the

ENTERED AS SECOND CLASS MATTER APRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER ACT OF MARCH 3, 1879.
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MAYNARD OWEN WILLIAMS

THEIR SCHOOL FLOORED BY STRAW MATTING AND ROOFED BY THE SKY, THESE YOUNG MOSLEMS STUDY THEIR LESSONS IN THE "GREAT OPEN SPACES"

Wrapped in voluminous woolen robes as protection against the chilly winds that sweep down Khyber Pass, Pakistani students and their black-bearded teacher hold their school outdoors. Small bookracks are used instead of desks. Boys and girls share the same classes until they are 10 or 12 years old. In their new nation, princes have given up power to the central government (Bulletin No. 5) and these youngsters are growing up in a world of many changes.

Ancient Siwa Revives as Tourist Mecca

THE remote oasis of Siwa in Egypt's Western Desert, in ancient times a Mecca for people who wished to consult its oracle, is enjoying renewed popularity because of wartime bombings.

Siwa is a depression in the arid wastes of the desert. Lying about 72 feet below sea level, the sandy hollow is the site of numerous springs which provide water for flourishing date-palm and olive groves in a region where rain is practically unknown.

Fragment of Oracle's Temple Remains

Siwa is nearly 300 miles southeast of Alexandria and about 180 miles south of Matruh, Mediterranean coastal town.

The magnet which drew to Siwa noted figures of ancient history including Alexander the Great was the Oracle of Ammon. This revered prophet was housed in a temple in what is now the crumbling village of Aghourmi. Among its huddle of massive old buildings of stone and mud (illustration, next page), a small fragment of the temple still stands.

Alexander was probably the most famous of all the visitors who came to consult the oracle. It assured him that he was of divine descent, the son of a god—a suspicion that Alexander himself had long entertained.

Present-day visitors, including such notables as United States Ambassador to Egypt Jefferson Caffery, are attracted to the temple ruins and to scores of comparatively untouched ancient tombs.

The existence of the tombs, which constitute a gold mine for archeologists studying the civilization of ancient Egypt, has long been known, but, until the bombing of World War II uncovered many of them, they had remained unexplored.

When the Italians bombed the oasis of Siwa in the early days of the war, the natives burrowed into the rocky hills for protection. This burrowing disclosed the presence of many tombs which had never before been opened. Some of these had beautifully painted walls and inscriptions, still readable, illustrating life in Egypt and Libya several centuries before the birth of Christ.

Villagers Differ Politically

The oasis centers in the village of Siwa, which has about 900 inhabitants. The community of mud and stone houses is divided into eastern and western parts. The inhabitants of these sections are jealous of each other. In times past one area consisted mostly of the original Berber settlers and the other of their Arab conquerors. Living in close quarters has destroyed racial distinction. The chief differences of these villagers are now political.

During World War II the oasis was used as a base for raids into Axis-held territory by Britain's fabulous Long Range Desert Patrols. During the First World War it was necessary for the British to take Siwa from the Senussi, a Moslem sect that stood on the side of the Central Powers.

These modern British were more successful than many early attackers of Siwa. One of these—Cambyses, Persian conqueror of Egypt and son

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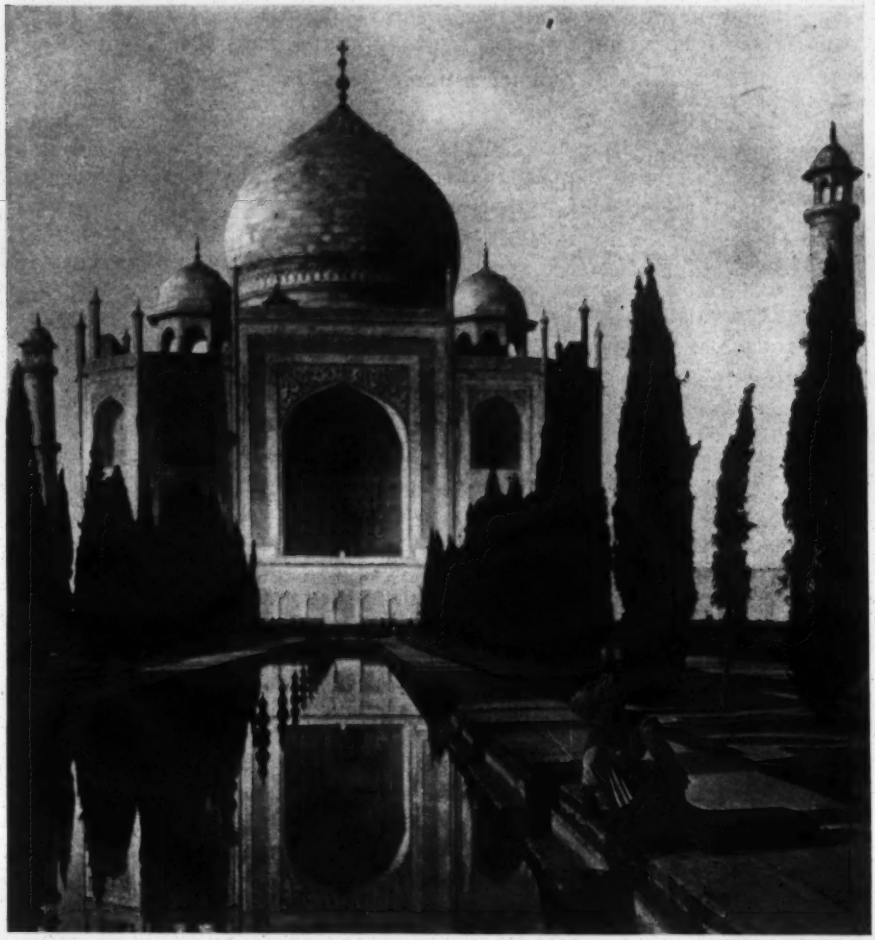
terrace. The whole group is set in formal, tree-lined gardens with reflecting pools to mirror its breath-taking beauty.

Visitors from all over the world who travel across the hot, dusty central plain of India to view the Taj Mahal agree that it is beautiful in any light, but the enchantment grows when the silvery whiteness of moonlight floods the scene.

NOTE: Agra may be located on the National Geographic Society's map of Southwest Asia. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

See also, "High Adventure in the Himalayas," in *The National Geographic Magazine* for August, 1952; "Around the World in Eighty Days," December, 1951; "Feudal Splendor Lingers in Rajputana," October, 1948; "The Idyllic Vale of Kashmir," April, 1948; "Delhi, Capital of a New Dominion," November, 1947; "India Mosaic" and "South of Khyber Pass," April, 1946; "India—Yesterday, Today, and Tomorrow," October, 1943; and "In the Realms of the Maharajas," December, 1940. *(Back issues of the Magazine may be obtained from the Society's headquarters at 60¢ a copy, 1946 to date; $1.00, 1930-1945; $2.00, 1913-1929. Earlier issues at varied prices.)*



MAYNARD OWEN WILLIAMS

A PLACID POOL, SET IN A GREEN FRAME OF GRASS AND TREES, REFLECTS THE DAZZLING WHITE MARBLE GLORY OF THE TAJ MAHAL AT AGRA

Bulletin No. 3, January 19, 1953

Nova Scotia Strikes Its First Natural Gas

NATURAL gas has been discovered in Nova Scotia, Canada's Atlantic headland province.

When an exploratory well "blew in" a gas strike several months ago, it brought immediate speculation that oil might be found also. For either natural gas or oil, Nova Scotia constitutes hitherto untapped territory on the world's petroleum map.

Gas Centers Far From Eastern Seaboard

Canada's oil and gas boom now centers on its vast prairie provinces, Alberta and Saskatchewan. Natural gas is also found in western Ontario. The nearest that drillers have come to Nova Scotia, however, has been near Moncton, New Brunswick, Canada's mainland province to the north of Nova Scotia, across the Bay of Fundy. There relatively small quantities of gas have been obtained for many years.

In the United States as in Canada, the great centers of natural gas are far from the eastern seaboard. Leading all others is the derrick-dotted block of states in the south and southwest—Texas, Louisiana, Oklahoma, Kansas, New Mexico, Mississippi, and Arkansas.

The oilfields of southern California rank second; third are the fields of the northeast—those of Pennsylvania, West Virginia, and Ohio.

Through steel pipe lines which fan out like a giant's fingers, natural gas today is brought hundreds, even thousands, of miles overland to heat cook stoves and furnaces in homes, and power factories in heavily industrialized New England, where there is little natural gas.

Nova Scotia is known primarily as a fishing and farming province. The Annapolis-Cornwallis Valley, west of Antigonish along Nova Scotia's northern shore, is noted for enormous crops of fine apples. The province produces an average of 2,200,000 barrels annually. Three quarters of the crop is shipped to British markets.

Rugs, Newsprint, and Fish Important Products

Its beautiful scenery, with opportunities for sailing, swimming, and fishing, have made Nova Scotia a popular summer resort. The province is also "kingdom of the lobster," producing more than any other country in the world. Every summer the residents of Pictou on the north shore celebrate with a Lobster Fisheries Carnival.

Nova Scotia's extensive industries range from beautiful hooked rugs —many of the loveliest made by the Acadian women of Cheticamp, on Cape Breton Island—to the newsprint mills that produce tons of paper from local wood for newspapers across the seas. Cod and halibut, frozen or smoked, are processed in vast quantities at Halifax.

Ships that crowd the harbor of Halifax tie Canada to the world. Many of them are built in the shipyards of Lunenburg, on the south coast.

Geologists struck gas about 400 feet down near the quiet town of Antigonish, while exploring for deposits of salt and limestone. Indians once knew this area, near the head of a narrow bay indenting the north

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of Cyrus the Great—dispatched an army of 50,000 men against the oasis. The blinding devastation of desert sandstorms destroyed his forces. Not a single survivor was left to report on the disastrous attempt to capture the desert stronghold.

NOTE: Siwa is shown on the Society's maps of Africa and Southwest Asia.

For additional information on the region, see "Spotlight Swings to Suez," in *The National Geographic Magazine* for January, 1952; "Sinai Sheds New Light on the Bible," December, 1948; "American Fighters Visit Bible Lands," March, 1946; "Daily Life in Ancient Egypt," October, 1941 (out of print; refer to your library); and "Change Comes to Bible Lands," December, 1938.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, October 6, 1952, "Egypt Adds to Ancient and Modern History"; "Riot-Torn Cairo Outranks All Arab Cities," February 18, 1952; and "Egypt's Deathless Sphinx Keeps Desert Vigil," October 15, 1951.

A. M. HASSANEIN BEY

SIWA'S ANCIENT FORTRESS DOMINATES AN OASIS IN EGYPT'S WESTERN DESERT

Siwa was already old in the fourth century B.C. when Alexander the Great came to consult the oracle in its famous Temple of Ammon. The great mass of stone structures which towers skyward 350 miles west of Cairo indicates that Siwa was fortified against marauding tribes many centuries ago. Violent sandstorms aided in the protection of the village by destroying attacking armies. Siwa's numerous springs water the date palms for which the almost rainless region is famous.

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Herring Makes History and Teaches Geography

THE red herring, useful to politicians making campaign speeches, is no myth, but a useful food. It is an important species of fish which for centuries has made history and taught geography.

Vikings crossed the North Sea to the British Isles largely because the herring, their chief food, had at that time forsaken the Scandinavian coasts. With the herring began the prosperity of the Hanseatic League in the 13th century, and when the fishery was lost to them, the prosperity of the cities of the German merchant barons declined.

Charles I Taxed Fisheries Heavily

Joan of Arc might never have become famous if the French had won the "Battle of the Herrings" in 1428. The English who besieged Orleans needed herring for the Lenten meals of their army. The French failed in an attempt to cut off the party bringing back the herring. Thus the English were able to continue the siege and Joan gained her initial glory by saving the city.

Some of the few disputes between Canada and the United States have been over United States rights in the North Atlantic herring fisheries. When Charles I of England imposed heavy taxes on herring fishermen, he sowed some of the seeds of unrest which led to civil war and the loss of his throne—and his head.

But man's fortunes meant little to the herring, which today is the world's most valuable food fish and shows no signs of decreasing in numbers. While there are 200 branches of the herring family, the most important are the Atlantic *(Clupea harengus)* and Pacific *(Clupea palasii)* members. These differ from each other biologically but are classed together commercially.

Neither fish enters fresh water. Atlantic-coast anglers who take herring with snag hooks during spawning runs in such rivers as the Hudson and the Potomac catch glut herring, a species known scientifically as *Pomolobus aestivalis.*

Fishermen Catch Eleven Billion Annually

Atlantic and Pacific herring reproduce at sea. Only a quarter of an inch long when hatched, the herring grows rapidly. It is soon large enough to be eaten—but, if spared, may live for as long as 20 years.

In its complete report on these fish, the National Geographic Society's new *The Book of Fishes* says that man takes eleven billion herring a year, but that this is only five per cent of the total eaten by other fish, and by birds and animals. If the 30,000 eggs laid by an average female herring each year were to produce similarly productive generations, in 10 years herring would crowd all the other inhabitants out of the seas.

As for the red herring, it is merely a special grade of heavily salted Atlantic herring, smoked (illustration next page) for a long time to give it a rich brown color.

Cured in other ways, the same species of fish may be labeled kipper,

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coast, as "the place where branches are torn off the trees by bears gathering beechnuts."

Not far to the eastward swirls the Strait of Canso. Travelers cross this natural moat to reach Cape Breton Island with its mountains and misty glens, salty history, and beautiful Bras d'Or lakes (illustration, below). These lakes actually are deep inlets of the Atlantic Ocean which bisect Cape Breton Island.

Nova Scotia means "New Scotland," and the province lives up to its name. At Antigonish, each summer, kilted dancers in Scottish costumes kick and whirl in annual Highland Games. By the time next summer comes around, another sound may be added to the skirl of bagpipes—the clatter and groan of drilling rigs as Canadians probe for gas and oil in their beautiful maritime province.

NOTE: Nova Scotia is shown on the Society's map of Canada, Alaska & Greenland. See also, "Salty Nova Scotia" and "Tartan Tints New Scotland" (21 color photographs), in *The National Geographic Magazine* for May, 1940; and "Charm of Cape Breton Island," July, 1920; and, in the GEOGRAPHIC SCHOOL BULLETINS, December 3, 1951, "Fall Hunting Season Busies Micmac Indians."

GILBERT GROSVENOR

THE SHINING WATERS OF BRAS D'OR INDENT NOVA SCOTIA'S NORTHEASTERN FRINGE

About 40 miles east of Antigonish where recent natural-gas discoveries have been made, lie the beautiful Bras d'Or lakes. Set among the forests of Cape Breton Island (northeastern tip of Canada's Province of Nova Scotia), Bras d'Or is celebrated for its untouched beauty. On its shores Dr. Alexander Graham Bell, famous inventor, built a summer home. Some of his scientific experiments were made there. The place is now the summer haven of his daughter, Mrs. Gilbert Grosvenor, and her husband, President of the National Geographic Society.

Many Government Changes Mark 1952

A TENSE and troubled world changed few of its boundaries but many of its governments during 1952. War dragged on in Asia, and revolt flared in Africa. The cold war did not warm up.

In the Near East changes were the rule rather than the exception. In Iraq, a military leader took over following riots. Syria abolished all political parties but that in power. Iran seized the British-built oil industry, changed premiers twice, and broke off diplomatic relations with Britain. In Egypt, an army leader, General Naguib, forced King Farouk to abdicate and leave the country.

Japan Takes Back Reins of Government

The battle line in Korea remained near where it began along parallel 38. For two and a half years 16 of the United Nations have fought aggression by two communist countries. In Indochina, French and Viet Nam forces still battle communist armies of Viet Minh. Rubber planters in Malaya continue to go armed as protection against guerrillas.

Not all news from Asia was bad, however. The Japanese peace treaty went into effect on April 28. Tokyo took back the reins of government it lost on V-J Day. Thailand got a new constitution, and an heir to the throne—a son born to King Bhumibol Adulyadej. In Burma and Pakistan (illustration, inside cover) princely states yielded sovereignty to central authority. The fate of Jammu and Kashmir, contested by India and Pakistan, remained unsettled.

In the Near East, the Hashemite Kingdom of the Jordan deposed King Talal because of his precarious health and 17-year-old Crown Prince Hussein succeeded him. In November, Israel's first president, Dr. Chaim Weizman, died. Dr. Isaac Ben-Zvi was elected to succeed him.

Eritrea became an autonomous constitutional state federated with Ethiopia, with United Nations blessing. Libya undertook its first year as a monarchy.

West German "Peace Pact" Signed

Europe and the British Isles witnessed historic changes. In Britain, a second Elizabeth came to the throne on the sudden death of King George VI. A queen reigned over Britain and its Dominions for the first time since 1901 when Victoria died.

West Germany signed a "peace pact" with the United States, France, and Great Britain. Already ratified by the U. S. Congress, the treaty will go into effect and Allied occupation will formally end upon ratification by the British, French, and German legislatures.

Russia and her satellites continued to boycott and denounce Western Europe's strengthening organization. After six and a half years, Russian hindrance still blocks a peace treaty with Austria.

Greece and Turkey were admitted to membership in the North Atlantic Treaty Organization.

Adoption of the Schuman Plan to internationalize coal and steel facili-

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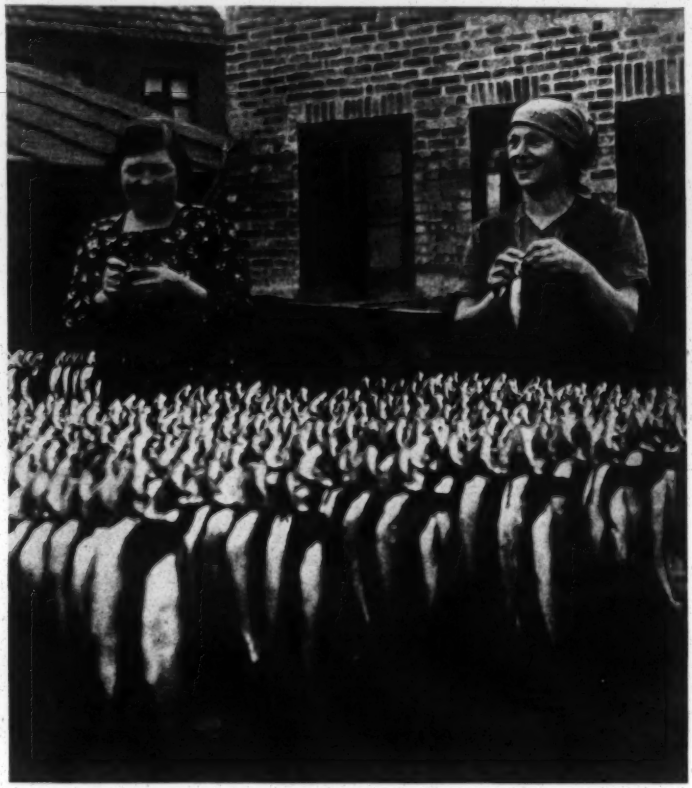
whitebait, or bloater. The latter is a specialty of Yarmouth, England, and that city's American namesake—Yarmouth, Nova Scotia.

Red herring is intended primarily to be eaten in Mediterranean countries where almost everyone likes strongly flavored foods. English squires wishing for any reason to end a fox chase in mid-progress long ago found out that hounds would follow a red herring rather than the fox if the herring were dragged across the fox's trail.

When political orators today accuse an opponent of "dragging a red herring across the trail," they mean that he is trying to divert attention from some other issue.

NOTE: Regions where herring are caught in large quantities may be located on the Society's maps of the North Atlantic and Europe and the Near East.

For additional information on fisheries, see "Menhaden—Uncle Sam's Top Commercial Fish," in *The National Geographic Magazine* for June, 1949; "Shad in the Shadow of Skyscrapers" and "Fishing in the Lofotens" (14 photographs), March, 1947; "Fishing in Pacific Coast Streams," February, 1939; and "When the Herring Fleet Comes to Great Yarmouth," August, 1934 (out of print; refer to your library).



WOMEN OF DENMARK'S BALTIC ISLAND OF BORNHOLM READY THE HERRING CATCH FOR SMOKING

They pin a pair of fish together and hang them on racks to dry for a few hours. Then the racks are taken to the smokehouse where the dense fumes of smoldering fires turn the gleaming silver of the herring to a glistening bronze. The fish are then packed for shipment, the greater part for Copenhagen, west of Bornholm, around the southern tip of Sweden.

ties of Western Europe brought into existence an economic community of six nations that opened the way for greater prosperity and political cooperation between France, West Germany, Italy, Belgium, the Netherlands, and Luxembourg (illustration, cover).

The United States and Denmark entered into agreements under the NATO pact which resulted in a new giant air base at Thule, Greenland.

Several Latin American nations, including Bolivia (illustration, below), set up new governments. On March 1, democratic Uruguay abolished its presidency and gave executive authority to a *colegiado*, or council, patterned on the Swiss system.

The United States Congress approved a new constitution for Puerto Rico, changing the island from a territory to a commonwealth and giving Puerto Ricans a greater measure of self-rule.

JAMES C. SAWDERS

MINERS' FAMILIES, RETRIEVING EMPTY LUNCH PAILS, INDICATE THE NOONTIME BREAK IS OVER

High in the Andes of western Bolivia, the famous Llallagua mines at Catavi bore from almost 15,000 feet above sea level a thousand feet down into the earth. Many of the miners eat their midday meal underground. They return the food containers on flatcars to their waiting wives and children who brought the meal. Bolivia's governments may come and go, but tin mining continues the chief support of the little sky-high South American nation.

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